**The Facts on August 2009 Fish Kill in Sanilac County's Black River**

On Monday, August 10, 2009, the Department of Environmental Quality (DEQ) was notified of a reported fish kill in the Black River in northern St. Clair County. This notification was received from the DEQ's sister agency, the Department of Natural Resources (DNR).

Following interagency protocols, DNR's Fisheries Division staff notify the DEQ's Water Bureau upon a determination that a confirmed fish kill may involve discharges of pollutants to waters of the state. The DEQ is the state's regulatory agency tasked with enforcing state laws prohibiting the discharges of substances that are or may become injurious to various uses of the state's water resources. Colleagues within the DNR support the DEQ in its enforcement efforts by documenting the extent of the resource damage, in this instance, the magnitude of the fish kill.

In the best professional judgment of fisheries biologists within the DNR, the Black River Fish Kill appeared to be a significant die-off not related to natural, seasonal fluctuations in dissolved oxygen concentrations or disease. As fisheries biologists continued to document the extent of the fish kill, Water Bureau investigators moved upstream into Sanilac County, evaluating tributaries to the Black River in an effort to narrow the potential source area. By Monday evening, attention was focused on Seymour Creek, a tributary to Black Creek which in turn is a tributary to the Black River.

Water Bureau investigators continued to look for pollution sources in the vicinity of Seymour Creek. Investigators discovered a discharge of agricultural waste from a field adjacent to the Lawson Drain, a tributary to Seymour Creek. Water samples were collected from drainage tile discharging to the Lawson Drain and from the drain itself for analysis at the DEQ's laboratory in Lansing. Persons involved in the land application of the agricultural waste to the former wheat field were instructed to commence response activities to stop the unlawful discharge.

The DEQ/DNR investigative team continued to document the effects of the identified discharge and the fish kill throughout Seymour Creek, Black Creek, and the Black River, while also evaluating other tributaries to the Black River searching for additional sources of pollution.

Discharges of agricultural waste to waters of the state have long been a concern to both the DEQ and DNR. The abundance of organic material in manure and other agricultural wastes can quickly deplete available oxygen from receiving waters, posing a risk to a variety of aquatic life, including fish. In addition to oxygen depletion attributable to the oxygen-demanding organic material, high concentrations of ammonia are extremely toxic to aquatic life during warmer temperatures. Wastes collected from dairy operations also can include concentrations of copper (used as disinfecting footbath for cows in the milking parlor) that may adversely affect aquatic life. These adverse water quality effects are magnified during extremely warm weather and in late summer when oxygen concentrations in streams are at their lowest points statewide.

The parties responsible for the agricultural waste discharge were notified on August 11, 2009, of the alleged violation of state law, and agency staff are presently evaluating responses to the August 11 notice and all other available evidence.

Persons wishing to share information regarding the Black River Fish Kill are encouraged to contact Nicole Zacharda, Water Bureau Enforcement Specialist, at 517-241-4115 or zachardan@michigan.gov.